CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

GRANT SOLICITATION AND APPLICATION PACKAGE

Public Interest Energy Research - Natural Gas (PIER-NG)
Subject Area: Advanced Generation, Combined Heat & Power Systems

Release Date: July 28, 2006

Proposal Due Date: September 14, 2006

Purpose:
This is a focused grant solicitation with the intent of supporting research, development, and demonstration (RD&D) that will advance the science, technology, and market acceptance in California of grid-connected, packaged Combined Heat and Power (CHP) systems (including Combined Cooling, Heating and Power [CCHP] systems), which are closely integrated with prime movers (engines and turbines) in the range of 60 kilowatts (kW) to 10 megawatts (MW).

Availability of Solicitation Documents and Information:
This solicitation and all supporting documents and forms can be found at http://www.energy.ca.gov/contracts/index.html under "Current Solicitations." Interested parties may also sign on to the electronic mailing list on this webpage to ensure they are notified of any changes to this solicitation.

For those parties without Internet access, copies of solicitation documents and information can be obtained by contacting:

Energy Generation Research Office Administrative Assistant
California Energy Commission
1516 Ninth Street, MS-43
Sacramento, CA 95814
Telephone: (916) 651-9312

In addition, you may request to be added to the mailing notification list to receive changes made to this solicitation.

Background:
The California Energy Commission's (Energy Commission's) Public Interest Energy Research–Natural Gas (PIER-NG) Program is releasing this solicitation to support RD&D projects in the research subject area of Advanced Generation. The purpose of funding under this area is to improve the performance and advance the market acceptance of CHP systems in California, with the broad objective of increasing the efficiency and reducing the emissions (including greenhouse gases) of natural gas used in commercial and industrial electricity generation, space conditioning, and process heating and cooling.

The Energy Commission is now requesting proposals in order to select projects for possible funding.

Funding Information:
The total funding available for this subject area in calendar year 2006 is **$750,000**. It is anticipated that **one or two projects will be selected for funding**, which will be awarded as grant(s).

Eligible Projects:
Eligible projects will advance the science, technology, and market acceptance of grid-connected, packaged CHP and CCHP systems, which are closely integrated with prime movers in the range of 60 kW to 10 MW in California. This competitive solicitation will focus on the following RD&D topics:

- Meeting the California Air Resources Board (CARB) proposed 2007 emissions standards for distributed generation (DG) and DG/CHP systems. (Information can be found at http://www.arb.ca.gov/energy/dg/dg.htm.)
- Developing low cost, reliable and robust emissions sensors and monitoring components and systems.
- Developing control systems.
- Matching electric and thermal loads to facility needs, which may vary over time.

A suitable RD&D project available for funding under this solicitation must address one or more of these issues, or related issues that are technical barriers to the market acceptance of grid-connected, packaged, integrated, 60 kW to 10 MW CHP and CCHP systems in California.

Eligible Applicants:
This is an open solicitation and all types of organizations are eligible to apply. PIER program Contractors with existing agreements may apply under this solicitation. However, proposals submitted under this solicitation may only request funding for new projects or new tasks associated with existing projects. Funds under this solicitation are not eligible to augment activities currently funded under other existing PIER agreements.

Multiple Proposals:
Organizations are allowed to submit multiple proposals. However, each proposal must be for distinct, separate projects and must be submitted separately adhering to all requirements contained in this solicitation.

Project Selection and Award Process:
The following process will be utilized to recommend project(s) for funding:

1. Based on the proposals submitted, a scoring committee will score the projects using the scoring criteria described in Attachment A.

2. A minimum score of 24 (out of 32) is required for funding.

3. Those projects receiving at least the minimum score will be ranked according to their overall score.

4. Project(s) will be recommended for funding starting with the highest ranked project until all funds are exhausted.

5. The Energy Commission reserves the right to negotiate with the proposer(s) to modify the project scope, the level of funding, or both.

6. If the Energy Commission is unable to successfully negotiate and execute a funding agreement with a proposer, the Energy Commission, at its sole discretion, reserves the right to cancel the pending award and fund the next highest ranked eligible project proposal received under this solicitation.

7. A Notice of Proposed Awards will be released.

8. Project(s) recommended for funding will scheduled and heard at an Energy Commission Business Meeting.

If approved at an Energy Commission Business Meeting:

9. Approved Grant Recipient(s) will be required to prepare a detailed set of award documents* including, but not limited to, a Work Statement, list of products and due dates, and detailed budget documents. Funding will be awarded only upon satisfactory completion of these documents.

10. Upon receiving the required documents, a Grant Agreement, which includes applicable Terms and Conditions*, will be written and sent to Recipient(s) for review, approval and signature.

11. Once returned to the Energy Commission, the Energy Commission will fully execute the Grant Agreement. Recipient(s) are approved to begin the project only after full execution of the Grant Agreement.

* ***Samples of the required detailed award documents and the PIER Grant Terms and Conditions can be found at http://www.energy.ca.gov/contracts/ as part of this solicitation package. Please note, however, the Energy Commission reserves the right to modify these documents and/or terms and conditions prior to executing grant agreements.***

Proposal Requirements:
It is requested that proposals contain the following elements. ***Failure to include these elements WILL result in your proposal receiving a lower overall score and MAY result in your proposal being rejected and not eligible for funding.***

1. Contact information, including: contact person's name, email address, entity name, physical address, telephone number, and fax number.

2. Abstract/summary of the project (one page maximum), which includes the title; brief project description; quantitative, measurable goals to be achieved by the end of the project; the project duration and date of completion; amount of PIER-NG funding requested; and total project budget.

3. A discussion/explanation of how your proposed project addresses each of the scoring criteria as described in Attachment A.

4. A task-by-task description of your project. Include for each task a one-sentence goal of the task, a list of the activities you will perform, results or product(s) produced, and the duration of the task.

5. Project budget information, including the source(s) of match funding, and a justification for the share of match funding. Include the form in Attachment B: PIER-NG funding for each task detailed by category on the first spreadsheet, match funding for each task detailed by category on the second spreadsheet, and summary task budget on the third spreadsheet. This budget form is an Excel workbook which is posted on the Energy Commission website at www.energy.ca.gov/contracts as part of this solicitation package.

Proposal/Project Guidelines:
Your proposal must adhere to the following proposal/project guidelines. ***Failure to adhere to these guidelines MAY result in your proposal being rejected and not eligible for funding.***

1. Please provide one (1) original and five (5) copies of your proposal. The documents do not need to be bound; binder clips are acceptable. The original must be signed by an authorized representative of your organization.

2. Limit your proposal to a maximum of 20 pages total.

3. Use a standard 12-point font and 1-inch or larger page margins. Insert one blank line between paragraphs. Number the pages.

4. Multi-year project funding is acceptable, with a maximum project term of up to four years.

5. All project expenditures (match share and reimbursable) must be expended within the approved term of the funding agreement.

6. Maximum PIER-NG funding requests cannot exceed $750,000.

7. There is no minimum match funding share required, but the share of match funding will be considered in scoring the proposal (see the scoring criteria in Attachment A).

8. The budget should allow for the expenses of a Kick-off Meeting, one Critical Project Review meeting per year, and a Final Meeting. All meetings will be conducted at the Energy Commission located in Sacramento, CA.

9. The budget should allow for the preparation and submission of monthly progress reports (2-4 pages each) during the approved term of the agreement, and a final report that follows Energy Commission guidelines (as contained in the PIER Grant Terms and Conditions).

10. The purchase of equipment (items with a unit cost greater than $5,000 and a useful life greater than one year) with PIER-NG funds is discouraged due to disposition requirements associated with the equipment. There are no disposition requirements for equipment purchased with match share funding.

11. The budget must reflect estimates for ***actual*** costs to be incurred during the course of the project. The Energy Commission can only approve and reimburse expenditures for actual costs that are properly documented in according with the PIER Grant Terms and Conditions.

12. The budget must ***NOT*** include any profit from the proposed project, either as a reimbursed item or as match share. In accordance with the PIER Grant Terms and Conditions, NO PROFIT IS ALLOWED UNDER GRANT AGREEMENTS. Please review the PIER Grant Terms and Conditions for additional restrictions and requirements.

Confidential Information:
No confidential information will be accepted during the proposal and selection phase of this solicitation. If any confidential information is submitted, your entire proposal will be rejected and will not eligible for funding.

While discouraged, applicants may ***propose*** to deliver confidential products during the course of the project if funded. If necessary, instructions on submitting confidential products will be provided by the Energy Commission prior to executing the Grant Agreement.

Submission Requirements:
Proposals must be ***received*** by the Energy Commission's Grants and Loans Office by **4:00 p.m. (PDT) on Thursday, September 14, 2006.** Proposals must be mailed or delivered to:

California Energy Commission
Grants and Loans Office
Attn: PIER-NG Advanced Generation Grant Program
1516 Ninth Street, MS-1
Sacramento, CA 95814

Postmark dates of mailing, electronic mail (E-mail), and facsimile (Fax) transmissions are not acceptable in whole or in part under any circumstances. Proposals not received by the Energy Commission's Grants and Loans Office by the stated due date and time will be rejected and not considered for funding. Proposals received after the stated due date and time will be returned.

Grounds for Rejection:
Proposals ***WILL*** be rejected and not considered for funding if the proposal:

1. Is not received by the Energy Commission's Grants and Loans Office by the stated due date and time.

2. Contains any confidential information.

3. Proposes a project that has already been addressed or is being addressed.

4. Does not adequately address the CARB 2007 emission standards (as detailed in Attachment A, Scoring Criteria #1)

5. Does not demonstrate that the performance test procedures and the reporting of test results follow the nationally accepted standards and procedures established by the Association of State Energy Research and Technology Transfer Institutions (ASERTTI) (as detailed in Attachment A, Scoring Criteria #4).

Proposals ***MAY*** be rejected and not considered for funding if the proposal:

1. Does not address each element listed under "Proposal Requirements."

2. Does not adhere to the guidelines listed under "Proposal/Project Guidelines."

Amendment or Cancellation of this Solicitation:
The Energy Commission reserves the right to do any of the following:

- Cancel this solicitation;
- Amend or revise this solicitation as needed; or
- Reject any or all proposals received in response to this solicitation.

Questions:
Questions about this solicitation must be submitted in writing (e-mail or letter). The questions and answers will be posted on the Energy Commission website at www.energy.ca.gov/contracts as part of this solicitation package. The person and organization submitting a question will not be identified. There will be two rounds of questions and answers.

	Questions submitted by:	*Will be posted with answers on:*
Q&A Round 1	4:00 p.m. on August 14, 2006	August 18, 2006
Q&A Round 2	4:00 p.m. on August 28, 2006	September 1, 2006

Questions should be submitted to:

Arthur J. Soinski, Ph.D.
California Energy Commission
1516 Ninth Street, MS-43
Sacramento, CA 95814
Email: asoinski@energy.state.ca.us

Attachments:
A – Scoring Criteria
B – Budget Forms

Attachment A

2006 PIER-NG Program Scoring Criteria for Advanced Generation

Scoring will be based on the extent to which the proposed project addresses each of the following topics. Each criterion will be scored on a basis of 0 to 4 points and then multiplied by the corresponding weighting factor. The resulting scores will be summed to provide the overall project score. A minimum score of 24 (out of 32) is required to be eligible for funding.

1. The current status of the subject technology and how the proposed work will address barriers to advance the state-of-the-art and market acceptance of CHP systems meeting the specifications of the solicitation.

Criterion Scoring Range: 0 - 4
Weighting Factor: 1
Maximum Possible Points: 4

- The current status of the subject technology as it has been developed by the research and industrial community at large.
- Past and current work in the subject technology performed by the project team, including successes and failures.
- How the proposed project will address current barriers or knowledge gaps to advance the state-of-the-art and market acceptance of the CHP system.
- Describe why the proposed project has not been addressed and will not be addressed by the competitive or regulated markets.
- Distinctive and innovation aspects of the technical approach.
- A description – including specifications, data, and calculations – of how the system currently meets, or will meet by a specified date, proposed CARB 2007 emissions standards for distributed generation systems. Alternatively, describe why the system is exempt from these standards. ***Failure to satisfactorily address this criterion will be cause for rejecting your proposal.***
- The CHP system to be eventually commercialized satisfies a customer need that is not satisfied by existing CHP systems.

2. Technical Description of the Proposed RD&D

Criterion Scoring Range: 0 - 4
Weighting Factor: 2
Maximum Possible Points: 8

- The technical tasks are clearly and logically presented, with appropriate objectives, sequence of activities, products, schedule, and budget.
- Distinctive and innovative aspects of the approach are described.
- The likelihood of project success based on a sound research plan.

3. Identified Targets, Goals, and Market Application

Criterion Scoring Range: 0 - 4
Weighting Factor: 1
Maximum Possible Points: 4

- Impact of the proposed project on issues or problems associated with the use of natural gas in CHP systems.
- The extent to which the project will address significant barriers to the development and market acceptance of CHP systems.
- Quantitative or measurable technical performance goals, and the methodology used to determine if the goals have been achieved. Performance test procedures and the reporting of test results **must** follow the nationally accepted standards and procedures established by the Association of State Energy Research and Technology Transfer Institutions (ASERTTI), which are described at http://www.dgdata.org. ***Failure to adhere to this requirement will be cause for rejecting your proposal.***
- A reasonable path for commercialization of the technology if the project is successful.
- Public benefits to California natural gas stakeholders – residential, academic, commercial and/or industrial.

4. Project Budget

Criterion Scoring Range: 0 - 4
Weighting Factor: 1
Maximum Possible Points: 4

- The project cost is consistent with the work to be performed.
- The PIER-NG funding request and the match funding are appropriate and consistent with the expected level of public benefits, if the project is successful. The degree to which the project requires PIER-NG funding, rather than being funded from the competitive or regulated markets.

5. Qualifications of Project Manager and Project Team

Criterion Scoring Range: 0 - 4
Weighting Factor: 1
Maximum Possible Points: 4

- The Project Manager and team members have the technical capabilities and specific experience to successfully complete the project.
- The Project Manager can successfully manage the project, control cost, maintain the schedule, and report results and accomplishments in an effective manner.
- The project team collaborates with others to facilitate transfer of the technology to the next stage of development and/or commercialization.

6. Other significant factors that increase the project's merit

Criterion Scoring Range: 0 - 4
Weighting Factor: 2
Maximum Possible Points: 8

The following are examples of other significant factors that will be considered by the proposal evaluation team:

- The proposal shows that the technical approach is innovative or unique.
- The proposer's performance on previous Energy Commission Agreements has been superior.
- The degree to which the project contributes to a balanced PIER-NG portfolio across technology types, levels of risk, and/or time to commercialization.
- How well the project supports California energy policy, or may provide a basis for informing future energy policy.